

What is claimed is:

1. A substrate treating apparatus for performing cleaning treatment of substrates, comprising:
 - 5 a treating tank for receiving a cleaning liquid introduced through a bottom thereof, and allowing an excess amount of the cleaning liquid to overflow a top thereof;
cleaning liquid supply means for supplying the cleaning liquid to said treating tank; and
 - 10 flow control means for varying with time a feeding flow rate of the cleaning liquid from said cleaning liquid supply means during the cleaning treatment of the substrates placed in said treating tank.
- 15 2. A substrate treating apparatus as defined in claim 1, wherein said flow control means is arranged to repeat a supplying step for supplying the cleaning liquid, and a suspending step for suspending supply of the cleaning liquid.
- 20 3. A substrate treating apparatus as defined in claim 2, wherein the supply of the cleaning liquid is stopped for five to 30 seconds in the suspending step.
4. A substrate treating apparatus as defined in claim 2,
25 wherein a longer time is set for supplying the cleaning liquid

in the supplying step executed first than in the supplying step executed subsequently.

5. A substrate treating apparatus as defined in claim 1,
5 wherein said flow control means is arranged to repeat a first supplying step for supplying the cleaning liquid at a first flow rate, and a second supplying step for supplying the cleaning liquid at a second flow rate different from said first flow rate.

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6. A substrate treating apparatus as defined in claim 1,
wherein said flow control means is arranged to repeat a cold water supplying step for supplying the cleaning liquid at room temperature, a suspending step for suspending supply
15 of the cleaning liquid at room temperature, a warm water supplying step for supplying the cleaning liquid heated, and a suspending step for suspending supply of the cleaning liquid heated.

20 7. A substrate treating apparatus as defined in claim 6, wherein said flow control means is arranged to execute said cold water supplying step at a final stage of the cleaning treatment of the substrates.

25 8. A substrate treating apparatus as defined in claim 1,

wherein said substrate treating apparatus is arranged to store a chemical solution in said treating tank before the cleaning treatment of the substrates, and immerse the substrates in said chemical solution for chemical treatment of the substrates.

9. A substrate treating method for performing cleaning treatment of substrates immersed in a cleaning liquid inside a treating tank while introducing the cleaning liquid from cleaning liquid supply means into the treating tank through a bottom thereof, and allowing an excess amount of the cleaning liquid to overflow a top of the treating tank,

wherein flow control means varies with time a feeding flow rate of the cleaning liquid from said cleaning liquid supply means during the cleaning treatment of the substrates immersed in the cleaning liquid inside said treating tank.

10. A substrate treating method as defined in claim 9, wherein said flow control means repeats a supplying step for supplying the cleaning liquid and a suspending step for suspending supply of the cleaning liquid during the cleaning treatment of the substrates immersed in the cleaning liquid inside said treating tank.

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11. A substrate treating method as defined in claim 10,
wherein the supply of the cleaning liquid is stopped for five
to 30 seconds in the suspending step.

5 12. A substrate treating method as defined in claim 10,
wherein a longer time is set for supplying the cleaning liquid
in the supplying step executed first than in the supplying
step executed subsequently.

10 13. A substrate treating method as defined in claim 9,
wherein said flow control means repeats, during the clean-
ing treatment of the substrates immersed in the cleaning
liquid inside said treating tank, a first supplying step for
supplying the cleaning liquid at a first flow rate, and a
15 second supplying step for supplying the cleaning liquid at a
second flow rate different from said first flow rate.

14. A substrate treating method as defined in claim 9,
wherein said flow control means repeats, during the clean-
20 ing treatment of the substrates immersed in the cleaning
liquid inside said treating tank, a cold water supplying step
for supplying the cleaning liquid at room temperature, a
suspending step for suspending supply of the cleaning liquid
at room temperature, a warm water supplying step for
25 supplying the cleaning liquid heated, and a suspending step

for suspending supply of the cleaning liquid heated.

15. A substrate treating method as defined in claim 14,
wherein said flow control means executes said cold water
supplying step at a final stage of the cleaning treatment of
5 the substrates.

16. A substrate treating method as defined in claim 9,
wherein a chemical solution is stored in said treating tank
before the cleaning treatment of the substrates, and the sub-
10 strates are immersed in said chemical solution for chemical
treatment of the substrates.